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ABSTRACT

A study examined the dimensions of children's motivation for reading. Eleven different dimensions of reading motivations were proposed, including intrinsic and extrinsic motivations for reading, perceptions of reading efficacy, social aspects of reading, and reading disincentives. An 82-item questionnaire was developed to measure each dimension, with several items assessing each dimension. The questionnaire was completed by 105 fourth- and fifth-grade children in southern Maryland. Factor analyses showed that some of the proposed dimensions were clearly defined, whereas others were not. Several of the dimensions were correlated with children's book reading frequency in a school-based reading program. The dimensions that appear to be the most reliable include Reading Efficacy, Reading Challenge, Curiosity, Aesthetic Enjoyment, Recognition, Social, and Competition. A revised version of the questionnaire based on the statistical analyses was developed. (Contains 48 references and five tables of data. The original version of the Motivations for Reading Questionnaire is attached.) (Author/RS)

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READING RESEARCH REPORT NO. 34
Spring 1995

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About the National Reading Research Center

The National Reading Research Center (NRRC) is funded by the Office of Educational Research and Improvement of the U.S. Department of Education to conduct research on reading and reading instruction. The NRRC is operated by a consortium of the University of Georgia and the University of Maryland College Park in collaboration with researchers at several institutions nationwide.

The NRRC's mission is to discover and document those conditions in homes, schools, and communities that encourage children to become skilled, enthusiastic, lifelong readers. NRRC researchers are committed to advancing the development of instructional programs sensitive to the cognitive, sociocultural, and motivational factors that affect children's success in reading. NRRC researchers from a variety of disciplines conduct studies with teachers and students from widely diverse cultural and socioeconomic backgrounds in pre-kindergarten through grade 12 classrooms. Research projects deal with the influence of family and family-school interactions on the development of literacy; the interaction of sociocultural factors and motivation to read; the impact of literature-based reading programs on reading achievement; the effects of reading strategies instruction on comprehension and critical thinking in literature, science, and history; the influence of innovative group participation structures on motivation and learning; the potential of computer technology to enhance literacy; and the development of methods and standards for alternative literacy assessments.

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Dimensions of Children's Motivations for Reading: An Initial Study

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Abstract. *We discuss the development of a questionnaire measure of motivations for reading. Eleven different dimensions of reading motivations were proposed, including intrinsic and extrinsic motivations for reading, perceptions of reading efficacy, social aspects of reading, and reading disincentives. An 82 item questionnaire was developed to measure each dimension, with several items assessing each dimension. This questionnaire was completed by 105 fourth- and fifth-grade children. Factor analyses showed that some of the proposed dimensions were clearly defined, whereas others were not. Several of the dimensions were correlated with children's book reading frequency in a school-based reading program. Based on the statistical analyses, a revised version of the original questionnaire is presented.*

The engagement perspective that provides the theoretical basis for much of the ongoing research at the National Reading Research Center at the Universities of Georgia and Maryland includes motivation for reading as a crucial part of reading engagement. Researchers at the NRRC are developing frameworks for understanding children's motivation for reading (see Oldfather & Wigfield, in press, for more detailed discussion). One basic question regarding children's reading motivations concerns identification of the different dimensions of motivations for reading. The study described in this paper begins to answer this basic question. The development of a questionnaire (called the Motivations for Reading Questionnaire) to assess children's motivations for reading is described, and some of our initial findings from the first administration of the questionnaire are presented.

In developing the Motivations for Reading Questionnaire, we (Guthrie, McGough, and Wigfield, 1992) utilized work from both the general motivation literature and extant work on literacy motivations. Motivational researchers have proposed and investigated what they consider to be the most important motivational constructs that mediate achievement behavior. Yet most of their work has been on motivation in general rather than motivation for specific areas such as reading. Literacy researchers have looked at what engages children and adults in reading, but often only consider some of the constructs defined by motivation theo-

rists in their discussions of reading engagement. To bridge this gap, we drew from both these areas of work in developing the questionnaire. We begin this research report with a brief review of some of the constructs that researchers who study motivation believe mediate individuals' achievement behaviors. These constructs include ability and efficacy beliefs, subjective task values, achievement goals, and intrinsic motivation. This list is not meant to be exhaustive, but it does include many constructs that are central in different theoretical models of achievement motivation.

Ability and Efficacy Beliefs

Many researchers interested in motivation (e.g., Bandura, 1977; Eccles et al., 1983; Nicholls, 1984, 1990; Wigfield, 1994) focus on students' beliefs about their efficacy and ability to perform achievement tasks as crucial motivational mediators of achievement behavior. In discussing these beliefs, Eccles and Wigfield (1985) stated that they reflect the question "Can I succeed on this task?". Ability beliefs are children's evaluations of their competence in different areas. Researchers have documented that children's and adolescents' ability beliefs relate to and predict their achievement performance in different achievement domains like math and reading. (e.g., Eccles et al., 1983; Meece, Wigfield, & Eccles, 1990; Nicholls, 1979a). A construct related to individuals' ability beliefs is their expectancies for success. Expectancies refer to children's sense of how well they will do on an upcoming task, instead of their general belief of how good they are at the task (see Stipek, 1984). These beliefs also predict children's performance on different tasks.

Bandura's (1977; see also Schunk, 1991b) construct of self-efficacy also deals with individuals' expectancies about being able to do tasks; however, Bandura defined self-efficacy as a generative capacity where different subskills are organized into courses of action. Bandura (1977) proposed that individuals' efficacy expectations for different achievement tasks are a major determinant of activity choice, willingness to expend effort, and persistence. In work with school-aged children, Schunk and his colleagues (see Schunk, 1991b, for a review) have clearly demonstrated that students' sense of efficacy relates to their academic performance (see also Zimmerman, Bandura, & Martinez-Pons, 1992). They also have shown that training students both to be more efficacious and to believe they are more efficacious improves children's achievement in different subject areas such as math and reading. An important implication of the work on ability and efficacy beliefs for motivation for reading is that when children believe they are competent and efficacious at reading, they should be more likely to engage in reading.

Subjective Task Values

Subjective task values refer broadly to different incentives individuals have for doing achievement tasks. Eccles and Wigfield (1985) stated that the question "Do I want to succeed on this task?" is a question concerned with the value of a task. Answering the question "Do I want to succeed?" affirmatively is critical to motivation. Even if individuals believe they are

competent and efficacious at an activity and know what to do to succeed, they may not engage in it if they have no incentive for doing so. Thus, subjective task values refer to different purposes children have for engaging in tasks.

Motivation researchers are assessing children's subjective task values for different activities, along with children's ability and efficacy beliefs. Eccles, Wigfield, and their colleagues have done much of the recent work on the nature of children's and adolescents' subjective task values and on how these values relate to their performance and choice of different activities. They also defined different components of subjective task values, including *interest value*, defined as how much the individual likes the activity; *attainment value*, defined as the importance of the activity; and *utility value*, or the usefulness of an activity (see Eccles et al., 1983; Wigfield, 1994; Wigfield & Eccles, 1992, for reviews of this work and further discussion of the different components of subjective task values). A major finding from this work is that students' ability beliefs and expectancies for success predict their performance in mathematics and English, whereas their subjective task values predict both intentions and actual decisions to keep taking mathematics and English (Eccles et al. 1983; Eccles Adler, & Meece, 1984; Meece et al., 1990). For example, Meece et al. (1990) found that seventh- through ninth-graders' ability beliefs positively predicted students' expectancies for success and the value attached to math one year later, and negatively predicted math anxiety. The Year 2 math value ratings predicted the students' intentions to continue taking math more strongly than did their expectancies for success in math. Students' expectancies for success predicted end of that year math performance more strongly than did the students' valuing of math. These findings suggest that students' valuing of reading may be one of the more important predictors of their engagement in reading activities.

In related work, Pintrich and DeGroot (1990) looked at how students' valuing of achievement related to their cognitive strategy use. They found that seventh-grade students' perceived self-efficacy and valuing of science and English learning related positively to their reported use of cognitive strategies and self-regulation in those two subject areas. Like Meece et al. (1990), they also found that students' expectancies related more strongly to performance than did their subjective task values. However, in their regression analyses predicting different measures of performance from the motivational variables, strategy use, and perceived self-regulation, they found that the cognitive strategy and self-regulation scales directly predicted performance, whereas efficacy beliefs and values did not. Pintrich and DeGroot suggested that the effects of self-efficacy and values on performance were mediated through the other measures. They argued that students' self-efficacy may facilitate their cognitive engagement and their subjective task values relate to their choices about whether to become engaged, but their use of cognitive strategies and self-regulation relate more directly to performance. These results show how motivation and cognition can work together to facilitate (or impede) performance on different school subjects (see Pintrich

and Schrauben, 1992, for a theoretical model describing relations between motivation and cognition). In terms of reading, these findings suggest that students who believe they are efficacious at reading and value it as an activity are students who use more elaborate cognitive strategies as they read, and thus read better.

Achievement Goals

Currently, motivation researchers are also quite interested in children's achievement goals, which is another construct referring to the purposes children have for achievement (e.g., Ames, 1992; Dweck & Leggett, 1988; Nicholls, 1979b; Nicholls, Cheung, Lauer, & Patashnick, 1989). In discussing specific goals for achieving success, Nicholls and his colleagues (e.g., Nicholls, 1979b; Nicholls et al., 1989) defined two major kinds of goal orientations that children can have: *ego-involved goals* and *task-involved goals*. Individuals who adopt ego-involved goals seek to maximize favorable evaluations of their competence and minimize negative evaluations of competence. Questions like "Will I look smart?" and "Can I outperform others?" reflect ego-involved goals. In contrast, with task-involved goals, individuals focus on mastering tasks and increasing competence at different tasks. Questions such as "How can I do this task?" and "What will I learn?" reflect task-involved goals. In Dweck and Leggett's (1988) complementary analysis, ego-involved goals were called *performance* goals, and task-involved goals *learning* goals. Ames (1992), another researcher examining children's goals, uses the terms *performance* and *mastery* goals to describe these two goal patterns. These researchers have discussed how these kinds of goals influence individuals' performance in achievement settings and choice of different tasks. With ego-involved goals, children try to outperform others, and are more likely to do tasks they know they can do. Task-involved children choose challenging tasks and are more concerned with their own progress than with outperforming others. These researchers argue further that children who have task (or mastery) goals will be more likely to maintain positive motivation in school. An important implication of this work for reading instruction is that mastery/learning goals should be emphasized in reading instruction.

Researchers also have studied more specific goals for achievement. Schunk (1991a) argued that goal specificity, challenge, and proximity are important determinants of engagement in achievement tasks. When individuals have clear, specific goals they often perform better. Goals that are challenging at the appropriate level and that can be achieved in a relatively short period of time are more likely to be pursued than are goals that are not challenging, or that are too long-term. Schunk (1991a) reviewed findings showing that teaching children to set specific, proximal goals can increase their interest in doing certain academic tasks. These findings have clear implications for reading instruction and suggest that specific, proximal, challenging goals will facilitate children's performance as they learn to read. Much of Schunk's work has been with children doing relatively poorly in school, and his points about these kinds of goals may be most applicable to low achievers.

Finally, another approach to the study of motivational goals is Wentzel's (1989) *multiple goals perspective*. Wentzel proposed that there are a variety of different goals students have in achievement setting, including various academic goals like learning a task or just completing it, and social goals such as being with friends. Wentzel looked at how high- and low-achievers' achievement goals differed and found that high achievers had strong social and academic goals in school, whereas low achievers focused more on social goals. In terms of reading, this work suggests that children could have a variety of goals for reading that either could promote or deflate their engagement in reading.

Intrinsic Motivation

Intrinsic motivation refers to being motivated and curious to be engaged in an activity for its own sake, rather than for "extrinsic" reasons (see Deci & Ryan, 1985; Harter, 1981). One aspect of intrinsic motivation is total involvement in the activity one is doing. Many readers have experienced what Csikszentmihalyi (1978) describes as the "flow experience," losing track of time and self-awareness when becoming completely involved in an activity such as reading a book. Maehr's (1976) concept of continuing motivation is another important aspect of intrinsic motivation. He defined continuing motivation as individuals' engagement in a learned activity outside of the context in which it was learned. He argued that schools focus too much on learning in school and not enough on promoting children's continuing motivation to learn outside of the school setting.

Building on this work, Oldfather (1992) presented a social constructivist conception of intrinsic motivation identified as the *Continuing Impulse to Learn* (CIL). CIL is defined as an ongoing engagement in learning that is motivated by the learner's thoughts and feelings that emerge from the learner's processes of constructing meaning. It is characterized by intense involvement, curiosity, and a search for understanding, as the learner experiences learning as a deeply personal and continuing agenda (Oldfather, 1992). An important implication of these theorists' work for reading is that readers' engagement in reading will be greatly facilitated when they are intrinsically motivated to read and find personal meaning in the reading that they do.

In sum, motivation researchers and theorists have defined and studied several different motivational constructs, including beliefs about competence and ability, self-efficacy, valuing of achievement tasks, goals for achievement, and intrinsic motivation to learn. Theorists propose that these constructs mediate individuals' choice of different tasks, participation in those tasks, and persistence at them. Furthermore, these researchers propose that when individuals have positive ability beliefs about an activity and think they can do the activity efficaciously, value the activity for intrinsic reasons, and have mastery achievement goals, they should do better at the activity and choose to do it more frequently. However, most of these researchers have not looked specifically at whether these predictions apply to individuals' engagement in reading. One purpose of the present study was to begin to test these proposed links in the reading area.

Attitudes About Reading and Motivation for Reading

In the reading literature, some researchers have discussed affective and motivational factors that can influence reading engagement. These researchers looked primarily at two constructs. Some researchers assessed children's attitudes toward reading, which are defined generally as individuals' feelings about reading (see Alexander & Filler, 1976). Alexander and Filler stated that these feelings about reading should influence how much individuals involve themselves in reading; thus, attitudes about reading should relate to individuals' motivation for reading (see Matthewson, 1985; McKenna, in press; and Ruddell & Speaker, 1985, for more specific models of how individuals' attitudes toward reading influence their reading engagement). Although Matthewson (1985) stated that individuals' attitudes toward reading will differ across subject areas, scales designed to assess individuals' attitudes toward reading have remained rather general (e.g., McKenna & Kear, 1990). These scales to assess reading attitudes have not included items assessing the different motivational constructs discussed in the previous section.

Of the motivational constructs discussed in the previous section, the one receiving the most attention from reading researchers is children's interest in reading. Asher, Hymel and Wigfield (1978) and Asher and Markell (1974) found that elementary school children better comprehended high-interest than low-interest material. Researchers building on this work have looked more specifically at how interest affects comprehension. Schiefele (1991) assessed how college students' interest in text materials influenced their comprehension when the students' prior knowledge of the materials and general intelligence were controlled. Schiefele found that college students who were interested in the text materials used in the study processed those materials more deeply and used more elaborate learning strategies while reading than did students less interested in the materials.

Shirey and his colleagues also examined how individuals' interest in reading materials affects their comprehension and task attention (see Shirey, 1992, for a review). Like Asher and Markell (1974) and Asher et al. (1978), they found that children recalled more from interesting sentences (Anderson, Mason, & Shirey, 1984). Anderson (1982) also found that children paid more attention (as measured by duration of reading time) to interesting than non-interesting materials. Shirey discussed how children's better recall of the interesting sentences was not due to this attentional difference; when the relation between attention and recall was controlled, the relation between interest and recall still remained. Intriguingly (and in contrast to Anderson's [1982] work with children), in studies of adult readers, Shirey and Reynolds (1988) found that adults actually read sentences they found interesting faster than those they found less interesting, and recalled more about the interesting materials. Finally, Renninger (1992) found in studies of fifth and sixth graders that interest in the materials read enhanced comprehension, even of materials that were quite difficult for the children (although there were some gender differences in these patterns). Overall, these results indicate that students' interest in the material they are reading relates quite clearly

to the use of effective learning strategies, their level of attention, and their comprehension of reading materials. Thus, interest in reading appears to be an important motivational variable influencing different aspects of reading performance.

Measuring Motivations for Reading: The Motivations for Reading Questionnaire

In developing the Motivations for Reading Questionnaire (MRQ), we utilized research from both the general motivation literature and the literature on reading attitudes and motivation to propose several dimensions of motivations for reading. We first devised a set of possible dimensions or constructs that could comprise reading motivations and developed items to measure those constructs. We then interviewed a small group of children to see how they described their own motivations for reading and, following these interviews, modified some of the items. The initial version of the MRQ contains 82 items, with seven or eight items measuring each of the proposed dimensions (with the exception of reading importance, which was measured by Eccles et al.'s (1983) existing two-item scale). The original MRQ, with items organized into the proposed dimensions of motivations for reading, is presented in Appendix A. The proposed dimensions assessed in the questionnaire are described next.

The first two dimensions reflect the competence and efficacy constructs that are prominent in many motivation theories. These two dimensions also include the notion that reading is something that often requires children to work hard to accomplish. These dimensions are *Reading Efficacy*, the belief that one can be successful at reading, and *Reading Challenge*, the satisfaction of mastering or assimilating complex ideas in text.

The next set of dimensions are based in the work on intrinsic motivation, values, and goals and encompass both intrinsic and extrinsic aspects of reading motivations. The more intrinsic dimensions include *Reading Curiosity*, the desire to learn about a particular topic of interest to the child; *Reading Topics Aesthetically Enjoyed*, or the enjoyment of experiencing different kinds of literary or informational texts; and *Importance of Reading*, which is a dimension taken from Eccles' and Wigfield's (e.g., Eccles et al., 1983; Wigfield & Eccles, 1992) work on subjective task values. The notion of aesthetic enjoyment gained from reading refers to the pleasure gained from reading a well-written book or article on a topic one finds interesting. Although likely similar in certain ways to intrinsic motivation to read, this kind of aesthetic enjoyment is something we thought to be unique to the reading area, and so is different from traditional definitions of intrinsic motivation. We also distinguished different kinds of extrinsic motivation for reading. *Recognition for Reading* is the gratification in receiving a tangible form of recognition for success in reading, and *Reading for Grades* assesses the desire to be favorably evaluated by the teacher. These different aspects of extrinsic motivation reflect the fact that children do much of their reading in school where their reading performance is evaluated. Thus, recognition and grades may figure prominently in their motivations for reading.

The final dimensions include social aspects of reading, because reading often is a social activity. One proposed dimension is *Social Reasons for Reading*, or the process of sharing the meanings gained from reading with friends and family. A second is *Competition in Reading*, the desire to outperform others in reading. Third is *Compliance*, or reading because of an external goal or requirement. These dimensions are based on the work on achievement goals in the motivation literature. With the exception of Wentzel's (1989) work in the general motivation literature, social goals for achievement have not often been discussed. Such goals seem essential for reading motivation. Finally, a set of items asked students what they do not like about reading; we called this set *Reading Work Avoidance*.

A Study of Children's Motivations for Reading

In a Year 2 NRRC project, we gave the MRQ and some other measures of reading involvement to a group of elementary school children. The major purpose of the study was to examine the dimensions of children's motivations for reading. We addressed this question by analyzing children's responses to the MRQ in several ways. These analyses included factor analyses of children's responses, computing item-total correlations, and computing the internal consistency reliability of the theoretically-derived and empirically-derived dimensions of reading motivations.

A second purpose of the study was to address grade, time of measurement, and sex differences in children's responses to the MRQ. Recent research on children's motivation for reading and attitudes toward reading show that, in general, younger students have more positive ability beliefs and attitudes toward reading than older students. Eccles, Wigfield, Harold, and Blumenfeld (1993) and Marsh (1989) assessed children's ability beliefs about reading and found that older elementary school-aged children have less positive ability beliefs in reading than do younger elementary school children. Eccles et al. also found that older elementary school-aged children value reading less than the younger children. In a recent NRRC study, Gambrell et al. (1993) developed a 38-item scale that assesses three dimensions of reading motivation: self-concept of ability as a reader; the value of reading, which taps children's interest in reading and beliefs about its importance; and reasons for reading, which include things like reading to learn things, reading as a way to spend free time, and so on. They gave the questionnaire to 330 third- and fifth-grade students and looked at grade-level and gender differences in children's reading motivations. They found that third graders valued reading more and gave more positive reasons for reading than did the fifth graders. Similarly, girls reported valuing reading more than boys did and also gave more positive reasons for reading.

McKenna, Kear, and Ellsworth (1994) recently completed a cross-sectional national study of first- through sixth-grade children's attitudes toward reading. The reading attitudes assessed were *reading as a recreational activity* and *attitudes toward school-based reading*. They found that both aspects of students' attitudes toward reading were higher among

the younger students in their sample than among the older elementary school students, suggesting a decrease in attitudes toward reading across the elementary school years. In her interpretive studies of children's engagement in school reading and writing activities, Oldfather (1992; see also Oldfather & McLaughlin, in press) found that students' motivation to learn declined as they went into junior high school. Oldfather discussed how the students' ownership of their literacy learning lessened in junior high, and that once in junior high, students' goal orientations turned more to grades and other extrinsic purposes, rather than on the intrinsic interest in learning. This issue was addressed further in the present study in two ways. First, grade differences in children's responses to the MRQ were assessed. Second, because children completed the MRQ in the fall and spring of the school year, change over time in the mean level of children's responses to the MRQ was assessed.

The studies just cited (e.g., Eccles et al., 1993; Gambrell et al., 1993; Marsh, 1989; McKenna et al., 1994) also showed that girls are more positive in their ability beliefs and attitudes about reading than are boys. Therefore, we examined sex differences in children's responses to the various dimensions included in the MRQ.

Finally, to see if children's reading motivations as measured by the MRQ related to the amount of reading that they do, correlational analyses were performed between children's responses to the MRQ and their reports of their reading frequencies. A description of the study and the results obtained follows.

Method

Sample

One hundred five fourth- and fifth-grade children at an elementary school in southern Maryland participated in the study. There were 59 fourth graders and 46 fifth graders; 47 of the children were girls and 58 were boys. The children were from mixed socioeconomic backgrounds and were a racially and ethnically mixed group. Each child in the sample agreed to participate and received parental permission to participate.

Measures

Children completed measures of motivations for reading in the fall and in the spring of the 1992–1993 school year. These measures were: (1) The Motivations for Reading Questionnaire (MRQ), described above; and (2) The Reading Activity Inventory (Guthrie, McGough, & Wigfield, 1994), which asked children about different kinds of books they read, and how often they read them. The kinds of reading materials asked about included magazines, books in general, adventure books, mystery books, sports books, nature books, and comic books. Children were asked if they had read each of these kinds of materials within the last week and to list a title of the material if they had read it. They also were asked how frequently they read each of the kinds of materials.

We also obtained the number of hours each child in the study read outside of school, for the school years 1991–1992 and 1992–1993. This information was provided by the school's media specialist who worked with us on the

Table 1. Reliabilities for the Theoretically-Derived Reading Motivation Scales

Scale	Fall	Spring
Reading Efficacy	51	55
Challenge	66	72
Curiosity	68	80
Aesthetic Enjoyment	77	81
Importance	59	52
Recognition	57	66
Grades	63	47
Social	77	72
Competition	77	79
Compliance	71	70
Work Avoidance	40	56

Note. Decimals are omitted.

project. Children at the school participated in a reading program geared toward increasing how much they read. Students chose books to read each week and returned them the following week. The media specialist recorded the number of hours the students said they spent reading their books for each week during the course of the school year, for the 1991-1992 and 1992-1993 school years.

Results

Three questions are addressed by the results: (1) what are the dimensions of motivations for reading; (2) are there grade and sex differences in children's motivations for reading; and (3) how do reading motivations relate to the amount of reading children do?

Dimensions of Children's Motivations for Reading

Various analyses were done to determine whether the proposed dimensions of motivations for reading could be empirically identified. Another purpose of these analyses was to identify items that possibly could be deleted from the questionnaire. As a first step, unit-weighted scales were created for each of the proposed dimensions of motivations for reading by computing a mean score of all the items assessing each proposed dimension. The internal consistency reliabilities of these scales then were computed, at both the fall and spring times of measurement. These reliabilities gave an indication of the extent to which the items on each scale were coherent, with values greater than .70 preferable. The reliabilities are presented in Table 1. As can be seen in the table, some of the scales showed reasonable internal consistency, and others did not. The most reliable scales included Reading Challenge, Reading Curiosity, Aesthetic Enjoyment of Reading, Social Reasons for Reading, Competition, and Reading Compliance. The reliabilities of these scales ranged from adequate to good. The reliabilities for the other scales were

poorer, suggesting that the items proposed to form these scales in fact were not coherent.

Item-total correlations. As a first step toward deleting items from the questionnaire that did not seem to assess the dimension as proposed, item-total correlations were done for each of the proposed dimensions. These correlations assess the extent to which each item on a scale correlates with the total score on that scale. In general, these analyses showed that most of the items correlated moderately to strongly with the total score on the scale that included all the items assessing the proposed dimension of reading motivation. However, in several cases these item-total correlations were less than .40, the cut-off figure adopted. This occurred on the following scales in the fall administration of the questionnaire: Reading Efficacy (one item), Curiosity (one item), Recognition (two items), Grades (one item), Challenge (one item), and Reading Work Avoidance (two items). For the spring administration, the following scales had some items with lower item-total correlations: Reading Efficacy (one item), Recognition (one item), Grades (one item), Challenge (one item), and Reading Work Avoidance (one item). The items with low item-total correlations at each time of measurement generally were the same.

Factor analyses. To assess further the different proposed motivation dimensions and to help in decisions about which items to eliminate from the questionnaire, factor analyses were done. Factor analysis is a statistical technique that helps the researcher determine if groups of items go together to form a factor or a construct. It is a statistical tool often used in questionnaire development. Ideally, it is best to analyze all of the items together to see how many factors (or dimensions) emerge. Because there were so many items on this questionnaire, however, the sample size of the study was not large enough to do the factor analyses this way. Instead, the factor analyses were done on different subsets of the items. Before doing the factor analyses, the items were analyzed to see if any were badly skewed. Skewness indicates the extent to which responses to an item depart from a normal distribution. In the fall administration, five items were badly skewed. Two of these items were from the Grades scale and one each from the Efficacy, Compliance, and Aesthetic Enjoyment scales. In the spring administration, the same two items from the Grades scale were skewed. Additionally, one other item from the Grades scale, the same Efficacy item, and one Compliance item were badly skewed. These items were not included in the factor analyses.

The first factor analyses were done on the items from each individual motivational dimension to determine whether those items indeed did define that dimension. The analyses were constrained so that only one factor could emerge, and each item was unit weighted. In factor analysis, the determination of whether an item helps define a dimension is made by looking at the factor loadings of the different items. These loadings provide an indication of how strongly the item relates to (or loads on) the proposed factor. Although there is no absolute rule on the appropriate size for these loadings, many researchers use a value of .40 as a cut off. Results of the first factor analyses showed that although many of the items loaded on the dimensions they were proposed to assess, some did not. In the fall administration,

Table 2. Reliabilities for the Factorially-Derived Reading Motivation Scales

Scale	Fall	Spring
Reading Efficacy	63	68
Challenge	68	80
Curiosity	70	76
Aesthetic Enjoyment	72	76
Importance	59	52
Recognition	69	69
Grades	59	43
Social	78	72
Competition	75	81
Compliance	62	55
Work Avoidance	44	60

Note. Decimals are omitted.

the items loading at less than .40 on the appropriate dimension included: Social (Item 56), Compliance (Item 13), Reading Efficacy (Items 9, 15, 16, 18, and 58), Curiosity (Items 20, 23, and 45), Recognition (Items 40, 41, and 67), Grades (Items 18, 33), Challenge (Items 50, 66), Competition (Item 76), and Reading Work Avoidance (Items 8, 10, and 71). In the spring administration, the items loading less than .40 on the appropriate dimensions included: Social (Item 56), Compliance (Item 73), Reading Efficacy (Items 9, 15, 16, 18, and 58), Recognition (Items 41 and 67), Grades (Item 33), Challenge (Items 50, 63 ,and 66), Competition (Item 75), and Reading Work Avoidance (Items 8, 53, and 71). Many of these items were ones that showed poor item-total correlations. Next, these items with weaker loadings were eliminated, and the factor analyses on each separate motivation dimension were rerun. All of the remaining items loaded on the dimension they were proposed to assess.

Various pairs of the proposed dimensions then were factor analyzed using the reduced item set. The pairs were selected based on correlational analyses assessing relations among the proposed theoretical dimensions of motivations for reading. The pairs of theoretical dimensions that were more highly correlated were factor analyzed to see how distinct they were. Other pairs were selected for analysis as well, and a total of 18 pairs of dimensions were analyzed. In doing these analyses, only two-factor solutions were examined. Although at times there were more eigenvalues greater than 1 when the items assessing the pairs of theoretical dimensions were analyzed (which suggests that more factors might be present), an examination of those additional factors showed that they nearly always contained only one or two items and so were not meaningful. Of the 18 pairs of dimensions analyzed, 6 pairs showed very clear two-factor solutions in the fall and in the spring, with the items loading on the appropriate dimension: Social–Curiosity; Social–Compliance; Grades–Recognition; Challenge–Competition; Recognition–Competition; and Recognition–

Table 3. Correlations of the Factorially-Derived Motivation Scales

Fall	1	2	3	4	5	6	7	8	9	10
Social (1)	1.0									
Compliance (2)	26*	1.0								
Efficacy (3)	55**	25*	1.0							
Curiosity (4)	48**	32**	52**	1.0						
Aesthetic (5)	52**	39**	42**	52**	1.0					
Recognition (6)	62**	27**	60**	53**	41**	1.0				
Grades (7)	37**	46**	43**	49**	40**	52**	1.0			
Challenge (8)	39**	35**	51**	52**	54**	34**	50**	1.0		
Compete (9)	06	11	26*	15	05	34**	24*	25*	1.0	
Importance (10)	36**	42**	41**	49**	45**	44**	50**	44**	24*	1.0
Work Avoid (11)	-26**	-17	-14	-21*	-42**	-14	-19*	-32**	19*	-22*
Spring	1	2	3	4	5	6	7	8	9	10
Social (1)	1.0									
Compliance (2)	14	1.0								
Efficacy (3)	33**	29**	1.0							
Curiosity (4)	52**	26*	47**	1.0						
Aesthetic (5)	50**	28*	51**	62**	1.0					
Recognition (6)	50**	31**	53**	43**	49**	1.0				
Grades (7)	41**	40**	35**	37**	34**	51**	1.0			
Challenge (8)	49**	21*	49**	61**	62**	41**	30**	1.0		
Compete (9)	-01	09	24*	15	09	28**	19	22*	1.0	
Importance (10)	32**	37**	35**	42**	37**	52**	48**	27*	22*	1.0
Work Avoid (11)	-27**	-13	-26**	-30**	-33**	-29**	-14	-25*	16	-10*

Note: Decimals are omitted.
*$p < .05$. **$p < .01$.

Compliance. Other clear two-factor solutions were Grades–Competition in the fall administration; and in the spring Grades–Challenge, and Grades–Curiosity. In both fall and spring administrations, 4 pairs showed reasonably clear two-factor structures, although some double loadings occurred: Aesthetic–Challenge; Efficacy–Grades; Efficacy–Challenge; and Grades–Compliance. Other solutions like this in the fall were Grades–Challenge; Social–Aesthetic; and Efficacy–Curiosity. In the spring administration, the Grades–Competition pair also produced a reasonably clear two-factor structure with some double loads. Finally, the following pairs produced more mixed results, in which a clear two-factor solution did not emerge in either the fall or spring administration: Social–Recognition and Aesthetic–Curious. Additionally in the fall, the Grades–Curious and Challenge–Curious pair produced a mixed solution, as did the Social–Aesthetic solution in the spring administration.

Based on the analysis of skewness, the item-total correlations, and the factor analysis

Table 4. Means for the Statistically Significant Grade and Sex Differences on the Reading Motivation Subscales

	Grade Differences			
	Fall		Spring	
	4th *M*	5th *M*	4th *M*	5th *M*
Reading Efficacy	3.29	2.90		
Recognition	3.13	2.81		
Social	2.70	2.27		
	Sex Differences			
	Fall		Spring	
	Girls' *M*	Boys' *M*	Girls' *M*	Boys' *M*
Reading Efficacy	3.29	2.99		
Importance	3.41	3.07		
Social	2.78	2.32	2.63	2.20
Competition	2.37	2.78	2.15	2.74

Note. Scores range from 1 to 4.

of the single dimensions, 27 items were deleted from the original list. The items that were deleted are indicated by an asterisk in Appendix A. Unit-weighted scales reflecting the reduced item set were generated. Reliabilities for these scales are presented in Table 2. Several of the new scales showed improved reliability compared to the original theoretically-derived scales. These included Reading Efficacy, Challenge, Recognition, and Reading Work Avoidance (although the reliability for this scale was still low). Reliability of the following scales was similar for both questionnaire versions: Curiosity, Importance, Social, and Competition. The Aesthetic Enjoyment, Grades, and Compliance scales showed decreases in reliability.

Correlations of the motivation scales. Another way to look at similarity or difference among the proposed constructs is to look at the correlations between them. Pearson correlation coefficients were computed for the factorially-derived motivation scales, and the correlations are presented in Table 3. In general, most of the relations were positive, and ranged from low to moderately high. The strongest relations included those between Social and Recognition (r = .62 in the fall, .50 in the spring), Social and Aesthetic Enjoyment (r = .52 in the fall, .50 in the spring), Efficacy and Recognition (r = .60 in the fall, .53 in the spring), Curiosity and Aesthetic Enjoyment (r = .52 in the fall, 62 in the spring), Curiosity and Challenge (r = .52 in

Table 5. Relations of Children's Reading Motivations to Their Reading Frequencies

Fall Motivation Scales	1992 Hours Read	1993 Hours Read	Reported Book Reading—Spring 1993
Social	23*	18	32**
Compliance	07	23*	22*
Reading Efficacy	31**	36**	41**
Curiosity	13	24*	15
Aesthetics	26**	24*	35**
Recognition	14	24*	24*
Grades	12	21*	17
Challenge	04	11	35**
Competition	-15	01	01
Importance of Reading	11	20	24*
Work Avoidance	-18	-29**	-25*
Spring Motivation Scales	**1992 Hours Read**	**1993 Hours Read**	**Reported Book Reading—Spring 1993**
Social	21*	13	32**
Compliance	08	06	25*
Reading Efficacy	19	13	34**
Curiosity	29**	27**	36**
Aesthetics	37**	31**	37**
Recognition	23*	32*	37*
Grades	27*	32**	28*
Challenge	21	22	29*
Competition	-09	15	07
Importance of Reading	14	21*	42**
Work Avoidance	-08	-13	-23*

Note. Decimals are omitted.
*$p < .05$. **$p < .01$.

the fall, .61 in the spring), Aesthetic Enjoyment and Challenge (r = .54 in the fall, .62 in the spring), Recognition and Grades (r = .52 in the fall, .51 in the spring), and Grades and Importance (r = .50 in the fall, .48 in the spring). The Work Avoidance scale related negatively to all of the scales except to Competition. Although these correlations were at times high, in many instances the factor analyses just presented showed that the constructs were distinct.

Grade, Sex, and Time Differences in Children's Motivations for Reading

To assess grade and sex differences, 2 (Grade) by 2 (Sex) ANOVAs were run on the various motivation scales. The means for the significant grade and sex differences are presented in Table 4. In the fall, there were significant grade differences on three of the scales: Reading Efficacy, $F(1, 94) = 8.33$, $p < .01$; Recognition, $F(1, 94) = 4.86$, $p < .05$; and

Social, $F(1, 94) = 7.36, p < .01$. In all cases, the fourth graders had higher mean scores than did the fifth graders. In the spring, there were no significant grade differences.

In the fall administration, there were sex differences in children's reading motivations on four of the scales: Reading Efficacy, $F(1, 94) = 4.47, p < .05$; Importance, $F(1, 99) = 4.22, p < .05$; Social, $F(1, 94) = 8.38, p < .01$; and Competition, $F(1, 94) = 7.84, p < .01$. In all cases but the Competition scale, girls' mean scores were higher than boys' means. In the spring, there were significant sex differences on two of these scales: Social, $F(1, 91) = 8.57, p < .01$; and Competition, $F(1, 92), p < .01$. Girls had higher mean scores than did boys on the Social scale, and boys had higher mean scores than did girls on the Competition scale.

To assess whether the mean level of children's responses on the different motivation scales changed over time, paired *t*-tests were run on each pair of scales given in the fall and the spring. There were no significant differences in any of the means of the scales between the fall and spring administrations.

Relations of Children's Reading Motivations to Their Reading Frequencies

Table 5 presents the correlations of the various motivation scales to the number of hours children read in each of the two school years and their own reports of the frequency with which they read books (taken from the Reading Activity Inventory). The relations were in the low to moderate range. The *fall* motivation scales showing the strongest positive correlations with the hours students read outside of school and their reports of their reading frequencies on the *Reading Activity Inventory* included Social, Reading Efficacy, and Aesthetic Enjoyment; these correlations ranged from .18 to .41. Reading Work Avoidance was significantly and negatively related to reading frequencies, particularly the hours read during the 1992-1993 school year. The *spring* motivation scales most strongly and positively correlated to reading frequencies included Social, Reading Efficacy, Curiosity, Aesthetic Enjoyment, Recognition, Grades, and Reading Importance. These correlations ranged in size from .13 to .42. Again, Reading Work Avoidance related significantly and negatively to children's reports of their book reading frequencies.

Discussion

The results of this first study utilizing the Motivations for Reading Questionnaire provide some important new information about the nature of children's reading motivations and how children's reading motivations relate to children's reading behaviors. The reliability analyses and factor analyses showed that there are different dimensions of motivations for reading. The dimensions that appear to be the most reliable include Reading Efficacy, Reading Challenge, Curiosity, Aesthetic Enjoyment, Recognition, Social, and Competition. These analyses indicate that children's answers to questions about their reading motivations can be reliably classified into those different dimensions and suggest that children are motivated to read for a variety of different reasons as does Wentzel's (1989) *multiple goals perspective* in the general motivation literature.

These different dimensions of reading motivations can be characterized in terms of some of the important constructs in the general motivation literature. Certain dimensions (Curiosity, Aesthetic Enjoyment) can be thought of as intrinsic to the child, and thus are like the intrinsic motivation construct discussed earlier. The Aesthetic Enjoyment dimension adds an interesting new aspect to the intrinsic motivation construct. The Reading Recognition dimension is like the extrinsic motivation construct in the motivation literature. Two dimensions (Reading Efficacy, Reading Challenge) are analogous to the ability belief and efficacy constructs in the motivation literature. Another set of dimensions includes social aspects of reading (Social Reasons for Reading, Competition), something that has been less clearly discussed in the motivation literature. Thus, results of this study begin to bridge the gap between the motivation and reading research literatures.

The results of the analyses that attempted to determine different dimensions of reading motivations were somewhat mixed. The reliability analyses showed that some of the proposed dimensions of reading motivations were not very reliable. The scales that were less reliable include Importance, Grades, Compliance, and Work Avoidance. Similarly, the factor analyses showed that some of the proposed dimensions of reading motivations did not always form clear, distinct factors, and in fact were highly related to other dimensions. Dimensions that have overlap in their factor structure (and that are highly correlated) include Social and Recognition; Social and Aesthetic; Aesthetic and Curiosity; Grades and Curiosity; and Challenge and Curiosity. Thus, children who are curious to read more about interesting topics also appear to like challenging reading, enjoy a variety of reading topics, and want to get good reading grades. Children reading for social reasons like to be recognized for their reading and also enjoy reading about different topics.

The processes by which these relations operate need to be explored further in future research. Although important decisions were made in this study regarding which items to delete, and the deletion of items produced generally more reliable scales and a clearer factor structure, additional work of this type needs to be done. The revised questionnaire now is being given to a larger sample of students, and then the factor analyses will be done with more of the items included in the same analyses to identify more clearly the factor structure of children's motivations for reading. Based on those analyses, perhaps some of the different dimensions originally proposed to be distinct should be collapsed into broader dimensions.

Another purpose of this study was to explore some substantive issues regarding children's reading motivations. The first of these issues was whether there are grade and sex differences in children's reading motivations, as has been found in previous research (e.g., Eccles et al., 1993; Gambrell et al., 1993; Marsh, 1989; McKenna et al., 1994). There were grade-level differences on some of the scales, and these grade differences suggested that the older children (fifth graders) were less positively motivated than were the fourth graders, particularly in the fall of the year. However, in the spring, the grade differences were less prevalent, in large part because the

fourth graders' reading motivations declined some over the year. Furthermore, on several of the reading motivation dimensions there were no grade differences, which means that grade-related differences in children's reading motivations were not substantial in this study. Also, the mean level of children's responses to the different dimensions of motivations for reading did not change over time. To understand better how reading motivations change across the school years and reconcile the results of this study with those of the studies just cited that have shown grade differences, we need further longitudinal studies of children's reading motivations to determine more precisely when the declines in reading motivation and attitude do occur.

Boys and girls also differed in their motivations for reading, with girls generally showing more positive motivations for reading (although the differences between boys and girls decreased across the course of the school year). Girls also read more than boys did in the school's reading program, although this difference was not statistically significant. These findings would suggest that girls may be more likely to continue to be engaged in reading activities as they proceed through school. Given that performance in reading is such an important predictor of school success (Lloyd, 1978; Madden, Slavin, Karweit, Dolan, & Wasik, 1993), boys' lower reading motivations should be viewed with some concern.

Another important substantive issue was how the different dimensions of reading motivations related to the frequency with which children read. The correlational analyses showed that a number of the dimensions of children's reading motivations related to the amount of reading they did in the school's reading program. The dimensions relating most strongly to reading frequency included Social, Reading Efficacy, Curiosity, Aesthetic Enjoyment, Recognition, Grades, and Reading Importance. Thus, both more intrinsic (Curiosity, Aesthetic Enjoyment) and extrinsic (Grades, Recognition) reasons for reading related to children's reading frequencies. However, overall it appears that the more intrinsic reasons for reading and children's sense that they read efficaciously were the strongest correlates of reading frequency. These are among the most important results of this study, because they show that children's motivations for reading indeed do relate to an important aspect of their reading performance: the amount that they read. These results further demonstrate the importance of looking at different aspects of reading motivations as well, because the pattern of correlations of reading frequency and reading motivations vary considerably across the different dimensions of reading motivations.

The correlations of Social Reasons for Reading and number of hours read is particularly interesting. Although children's mean level on the social reasons for reading scale was low, suggesting that they do not often share reading activities with friends and families, that dimension was one of the stronger correlates of frequency of reading. Correlational data of course do not provide evidence of causality, but these results suggest that students should be given more opportunities to read with others, both at home and in school.

If these opportunities were provided, perhaps children would read more frequently.

To conclude, as part of the engagement perspective, researchers at the NRRC are developing new measures of reading motivation. The MRQ discussed in this paper is one example of such a measure; NRRC researchers (including Linda Gambrell and her colleagues, and Penny Oldfather and her colleagues) also are developing ways of studying children's reading motivations. As we develop new and better ways to understand student's reading motivations, we can better answer other questions about this important topic. These questions include (but certainly are not limited to) the following: (1) How do children become (or not become) engaged readers?; (2) How do different classroom cultures and contexts influence children's reading engagement and motivations for reading?; and (3) What individual and group differences are there in motivations for reading, and how do they change over time? All these questions will be topics of future investigation at the NRRC.

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APPENDIX A

The Motivations for Reading Questionnaire: Original Version

READING EFFICACY

3. I know that I will do well in reading next year
* 9. I don't know why I sometimes get low grades in reading
14. I am a good reader
* 15. Sometimes I don't feel as smart as others in reading
* 16. To do well in reading I have to get the teacher to like me
* 18. I know how well I am doing before I get my paper back
24. I learn more from reading than most students in the class
* 58. I know how to get good grades in reading if I want to

CHALLENGE

2. I like hard, challenging books
* 50. I need my parents to help me with my reading homework
* 63. I like to look up words I don't know
64. If the project is interesting, I can read difficult material
65. I like it when the questions in books make me think
* 66. I don't like it when we get a lot of difficult reading
68. I usually learn difficult things by reading
70. If a book is interesting I don't care how hard it is to read

CURIOSITY

6. If the teacher discusses something interesting I might read more about it
20. I have favorite subjects that I like to read about
22. I read to learn new information about topics that interest me
* 23. If I am reading about an interesting topic I sometimes lose track of time
25. I read about my hobbies to learn more about them
26. I like to read about new things
29. I enjoy reading books about people in different countries
* 45. I don't like to read books about living things

AESTHETICS

19. I read stories about fantasy and make believe
31. I like mysteries
* 37. I like stories with interesting characters
38. I make pictures in my mind when I read
47. I feel like I make friends with people in good books
57. I read a lot of adventure stories
61. I enjoy a long, involved story or fiction book

IMPORTANCE

81. It is very important to me to be a good reader
82. In comparison to other activities I do, it is very important to me to be a good reader

COMPLIANCE

4. I do as little schoolwork as possible in reading
7. I read because I have to
* 11. It is important for me to do my reading work carefully
* 13. I read things that are not assigned
39. I always do my reading work exactly as the teacher wants it
49. Finishing every reading assignment is very important to me
69. I always try to finish my reading on time
* 73. I do schoolwork so that the teacher can make sure I am paying attention

RECOGNITION

27. I like having the teacher say I read well
30. My friends sometimes tell me I am a good reader
32. I like to get compliments for my reading
* 40. It is important for me to get good comments on my reading papers
* 41. My parents give me gifts when I do well in reading
46. I am happy when someone recognizes my reading
48. My parents often tell me what a good job I am doing in reading
* 67. I don't care about getting rewards for being a good reader

GRADES

5. Grades are a good way to see how well you are doing in reading
* 33. Getting graded in reading makes me nervous
* 35. I like to get good grades in reading
* 36. Getting a high grade in reading makes me proud
54. I look forward to finding out my reading grade
59. I read to improve my grades
60. My parents ask me about my reading grade

SOCIAL

1. I visit the library often with my family
17. I often read to my brother or my sister
21. My friends and I like to trade things to read
34. I sometimes read to my parents
51. I talk to my friends about what I am reading
55. I like to help my friends with their schoolwork in reading
* 56. I don't like reading with other students
62. I like to tell my family about what I am reading

COMPETITION

12. I try to get more answers right than my friends
28. I like being the best at reading
72. I like to finish my reading before other students
74. I like being the only one who knows an answer in something we read
* 75. I hate it when others read better than me
* 76. My friends and I like to see who gets better comments on our papers
77. It is important for me to see my name on a list of good readers
79. I am willing to work hard to read better than my friends

READING WORK AVOIDANCE

* 8. I don't like to read out loud in class
* 10. I think worksheets are boring
43. I don't like vocabulary questions
44. Complicated stories are no fun to read

* 53. I don't like having to write about what I read
* 71. I don't like reading stories that are too short
78. I don't like reading something when the words are too difficult
80. I don't like it when there are too many people in the story

Note. Items with an asterisk were deleted in the revised version of the MRQ.

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